

UNITED STATES PATENT AND TRADEMARK OFFICE



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/062,644	01/31/2002	William J. Allen	10015643-1	2148	
7	7590 09/21/2005	EXAMINER			
HEWLETT-F	ACKARD COMPA	NATNAEL, PAULOS M			
	perty Administration	ART UNIT	DADED MUADED		
P.O. Box 2724	00	ARTUNII	PAPER NUMBER		
Fort Collins, C	CO 80527-2400	2614			
			DATE MAILED: 09/21/2005		

Please find below and/or attached an Office communication concerning this application or proceeding.

			Applicatio	n No.	Applicant(s)			
Office Action Summary		10/062,64	4	ALLEN ET AL.				
		Examiner		Art Unit				
			Paulos M.	Natnael	2614			
Period fo	The MAILING DATE of this commun r Reply	nication app	ears on the	cover sheet with the c	orrespondence ad	Idress		
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).								
Status								
1)⊠	Responsive to communication(s) file	ed on <i>7-1-0</i>	5.					
•	This action is FINAL . 2b) \boxtimes This action is non-final.							
· · · =		•			secution as to the	e merits is		
-,	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.							
Dispositi	on of Claims		·					
4)⊠	Claim(s) 2-7,9-15,17,18 and 20-24	is/are pendi	ing in the a	oplication.				
, —	4a) Of the above claim(s) is/are withdrawn from consideration.							
	☐ Claim(s) <u>2-7,9-15,24</u> is/are allowed.							
·	 ☐ Claim(s) <u>17,18 and 20-23</u> is/are rejected. 							
7)	Claim(s) is/are objected to.							
8)□	Claim(s) are subject to restriction and/or election requirement.							
Applicati	on Papers							
9)□	The specification is objected to by th	ne Examine	r.					
•				objected to by the E	Examiner.			
,—	10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).							
	Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).							
11)	11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.							
Priority ι	ınder 35 U.S.C. § 119							
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of:								
	1. Certified copies of the priority documents have been received.							
	2. Certified copies of the priority documents have been received in Application No							
	3. Copies of the certified copies of the priority documents have been received in this National Stage							
	application from the International Bureau (PCT Rule 17.2(a)).							
* See the attached detailed Office action for a list of the certified copies not received.								
A44 - 1:	Was							
Attachment(s) 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413)								
	e of References Clied (PTO-692) e of Draftsperson's Patent Drawing Review (F	PTO-948)		Paper No(s)/Mail Da				
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) 5) Notice of Informal Patent Application (PTO-152)						O-152)		
Pape	Paper No(s)/Mail Date 6) Other:							

Application/Control Number: 10/062,644 Page 2

Art Unit: 2614

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims **17,18,20-23** are rejected under 35 U.S.C. 102(e) as being anticipated by **Huibers** et al., U.S. Patent Application Publication 2002/0109821 A1.

Considering claim 17, see rejection of claim 18 below.

Considering claim 18,

a) providing an illumination source, is met by the light source 1;

b)directing light from the illumination source along an optical path, is met by Pipe 5;

c) sequentially filtering the directed light with at least one of plural cooperative color filters by altering the optical path to coincide with a selected one of plural color filters, is met by the disclosure "A method is also disclosed for changing the brightness and/or color saturation of a projection system, comprising providing a projection system having

a light source, a spatial light modulator, sequentially moving light filters provided two or

Application/Control Number: 10/062,644

Art Unit: 2614

more times within a light beam from the light source so as to alter light due to the sequentially moving filters into a series of filtered light time segments over time for each sequence of movable light filters, and projection optics, the light source disposed for providing light incident on the spatial light modulator, and the projection optics disposed for receiving light from the spatial light modulator; directing light from the light source through the projection optics via the spatial light modulator; and changing the brightness and color saturation by changing the movement of at least one sequence of moving light filters relative to at least one other sequence of moving light filters." on page 1, #[0013])

Considering claim 20,

- a) a first color wheel having a first number of color regions, is met by filter wheel 11, fig.2A.
- b) a second color wheel having a second number of color regions, is met by color wheel 12, fig.2A.
- c) the claimed each of the first and second color wheel being individually selectively adjustably cooperate in sequentially filtering the directed light to display an image, is met by the disclosure on Abstract, that "By changing the physical position or phase of one of the filters relative to another, the brightness and color saturation of the image projected through the projection optics can be changed." Further more, as disclosed in page 4, #[0046], "It is also possible to increase the frame rate with a multi color wheel embodiment. The phase between two color wheels (e.g. those of FIGS. 4 to 6) can be changed by more than a single segment (e.g. by rotating one wheel approximately 180

Art Unit: 2614

degrees relative to the other wheel) so as to result in the passage through the light beam of each color twice for each revolution of the two wheels. This is shown in the schematic of FIG. 10. In this way, it is possible for a projection system to have the flexibility of alternating between a single frame rate and a double frame rate."

Considering claim **21**, the sequential color filter system of claim 20, further comprising a carriage whereby the first color wheel is selectively moved into and out of the optical path, is met by central shaft 7, fig.2A.

Considering claim 22, the sequential color filter system of claim 21, wherein the second color wheel is selectively moved into and out of the optical path opposite the first color wheel, is met by figures 5A and 5B and the disclosure on #[0021].

Considering claim 23, see rejection of claim 18(c).

Response to Arguments

3. Applicant's arguments filed 7-01-05 have been fully considered but they are not persuasive. The applicant argues that Claim 18, as amended, recites a method of displaying an image including: "providing an illumination source', directing light from the illumination source along an optical path; and sequentially filtering the directed light with at least one of plural cooperative color filters by altering the optical path to coincide with only a selected one of plural color filters." That, the Examiner asserts that page 1,

paragraph (0013) (of Huibers et al.) discloses such altering of the optical path to coincide with a selected one of plural color filters. Applicants respectfully disagree, noting that none of the Huibers et al. does not even consider a changing optical path. Nevertheless, applicants have amended claim 1 to more clearly recite "altering the optical path to coincide with only a selected one of plural color filters." Inasmuch as Huibers et al. requires dual color filters (rather than selection of one color filter over the other), claim 18 is allowable over Huibers et al., and the rejection of claim 18 under 35 U.S.C. 102(e) based on Huibers et al. must be withdrawn.

The examiner submits that Huibers et al. simply discloses one embodiment two color wheels provide the ability to filter the light multiple times. (abstract of the disclosure) Huibers et al. however do not preclude selecting one color filter over the other. In fact, Huibers teaches "Whether a single or plural color sequencing elements are provided, a single light beam passes at least twice through a sequence of light filters." (Also abstract) Therefore, the argument is unpersuasive.

Allowable Subject Matter

4. Claims **2-7,9-15,24** are allowable over the prior art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (571) 272-7354. The examiner can normally be reached on 10:00am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571)272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Paulos M. Natnael Primary Examiner

Art Unit 2614

Pmn

September 18, 2005